Another Health Food Hazard—γ-Hydroxybutyrate-induced Seizures

To the Editor: We report another case of γ-hydroxybutyrate (GHB)-induced seizure in a young amateur body builder, who obtained the drug from a health food store.

Report of a Case

The patient, a 40-year-old man, suffered a 30-second tonic-clonic major motor seizure without a previous history of epilepsy, head injury, or substance abuse. He had been using 1 to 2 tsp per day (2.5 to 5.0 grams) of GHB, but on the day of the seizure took a larger dose (about 115 mg per kg of body weight) 20 minutes before onset of the seizure. Extensive neurologic and laboratory study results were negative. Off GHB for 30 months, he has remained seizure-free without treatment.

In reporting this case to the California Department of Public Health, we learned of other cases, recently reported in this journal.[1] The drug has been removed from the shelves of health food stores and fitness centers, and it is now illegal to promote and distribute GHB in California. As neurologists, we were intrigued that this drug, which has been used in animals as a model for experimental epilepsy in doses of 260 mg per kg of body weight,[2] was available in health food stores. The other actions of GHB in narcolepsy and its effect on muscle metabolism are well described.[3] As alternative sources for γ-hydroxybutyrate and other types of substances may develop, both physicians and patients should be aware of the hazards of health food store pharmacotherapy.

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REFERENCES

1. Chin MY, Kreutzer RA, Dyer JE: Acute poisoning from γ-hydroxybutyrate in California. West J Med 1992 Apr; 156:380-384

2. Snead OC: γ-Hydroxybutyrate model of generalized absence seizures: Further characterization and comparison with other absence models. Epilepsia 1988; 29:361-368

3. Mamelak M: Gammahydroxybutyrate: An endogenous regulator of energy metabolism. Neurosci Biobehav Rev 1989; 13:187-198

Licensing of Tissue Banks in California

To the Editor: A new law has recently been enacted in California that requires all tissue banks to be licensed by July 1, 1992 (Assembly Bill 2209, Speier, chapter 801 of Statutes of 1991, Health and Safety Code, Division 2, chapter 4.1 [commencing with section 1640]). It applies to all persons or entities who or that collect, process, store, or distribute human tissue for transplantation and includes physicians who process or store tissues such as semen, bone, and others in their office for use in treating patients.

This new law defines "tissue" as any human cell, group of cells, tissue, or organ including the cornea, sclera, or vitreous humor and other segment of, or the whole eye, bones, skin, arteries, semen, blood, or fluids, and any other portion of a human body. Six situations are exempt from licensure:

- The collection, processing, storage, or distribution of human whole blood or its derivatives by licensed blood banks, blood collection centers, and blood bank depositories (transfusion services).
- The collection, processing, storage, or distribution of tissue for autopsy, biopsy, training, education, or for other medical or scientific research or investigation, where transplantation of the tissue is not intended or reasonably foreseeable.
- The collection of a tissue by individual physicians and surgeons from their patients or the implantation of tissue by physicians and surgeons into their patients. This exemption shall not be interpreted to apply to any processing or storage of the tissue.
- The collection, processing, storage, or distribution of fetal tissue or tissue derived from a human embryo or fetus.
- The collection, processing, storage, or distribution by an organ procurement organization, as defined by Title 42 of the Code of Federal Regulations.
- The storage of prepackaged, freeze-dried bone by a general acute care hospital.

For further information and applications for tissue bank licensure, physicians should contact Ron Harkey, Examiner, Laboratory Field Services, at 2151 Berkeley Wy, Rm 602, Berkeley, CA 94704, or by telephone at (510) 540-2488.

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Pulse Oximeter Versus Electrocardiogram

To the Editor: I do not agree with Kevin K. Tremper, PhD, MD, that "Today, if given the choice of one monitor, most anesthesiologists would quickly choose the pulse oximeter over the electrocardiogram (ECG) or noninvasive blood pressure devices."[1] Anesthesiologists have several ways of monitoring ventilation and oxygenation by inspecting the patient. These include noting the chest movement and color of the skin and mucous membranes. No amount of inspection, however, will reveal cardiac dysrhythmias and ST segment changes that only the ECG can show.

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REFERENCE

1. Tremper KK: Noninvasive monitoring of oxygenation and ventilation—40 years in development. West J Med 1992 Jun; 156:662-663

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Dr Tremper Responds

To the Editor: In response to Dr Cozen's letter, he may be right. The only way to know would be to do a survey. I do not agree that it is necessarily easy to evaluate oxygenation by inspection. Comroe and Botelho showed in early studies that inspection was often misleading, especially in the presence of anemia.[1] It requires approximately 5 grams of circulating reduced hemoglobin to produce cyanosis. If a patient has a hematocrit of 27% (9 grams per dl) the Pao_2 would have to be below 25 mm of mercury before cyanosis would be detectable. In most patients we care for, a standard manual blood pressure cuff and palpation can provide an assessment of perfusion. An ECG will provide information in addition to the pulse rate provided by the pulse oximeter. In actuality, the ECG does not ensure there is a pulse. Analysis of the ST